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(54) MULTISTAGE POWER AMPLIFIER FOR HIGH FREQUENCY

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a multistage power amplifier for high frequency which can be improved in circuit stability by preventing the occurrence of oscillations in a frequency domain lower than its amplifying frequency band by suppressing the passing characteristic to a frequency lower than the amplifying frequency band in a feedback loop to a lower level and, in addition, the size of which can be reduced.

SOLUTION: This multistage power amplifier is provided with high-frequency transistors Q201 and Q201 constituted in multiple stages, stage-to-stage matching circuits (b) which make impedance matching between the transistors Q201 and Q202, and input matching circuits which make input impedance matching for the transistors Q201 in the first stage. The amplifier is also provided with output matching circuits connected to the transistors Q202 in the final stage and bias circuits which supply direct currents to the transistors Q201 and Q202. At least one of the stage-to-stage matching circuits (b) constitutes a high-pass filter. The circuit stability of the amplifier can be improved by suppressing the passing characteristic to a frequency lower than the amplifying frequency band to a lower level between the transistors Q201 and Q202.

